

MDP  
8/7/2006

*Claims*  
Amendments to the ~~Specification~~

1. (previously presented) A field effect transistor for detecting a magnetic field comprising:

a doped layer;

doped source and drain regions formed in said doped layer, said doped layer defining a lengthwise extending channel between said source and drain regions;

first and second drain contacts spaced laterally relative to the length of said channel located laterally proximate first and second lateral regions of said channel, respectively, and interconnected with said drain region;

a gate proximate said channel, for controlling current that may flow from said source to said drain region; and

first and second supplemental gates, electrically isolated from each other and said gate and located laterally proximate said first and second lateral regions and said channel, respectively,

wherein said first supplemental gate is interconnected with said second drain contact, and said second supplemental gate is interconnected with said first drain contact, so that said first and second supplemental gates exert a lateral electric field in said channel as a result of imbalanced current flow through said first and second drain contacts.

2. (cancelled)